IN THE CLAIMS

Please substitute the following listing of claims for the previous listing of claims.

1. (Previously presented) A method of coating a surface of an aluminum component, the method comprising:

(a) anodizing the surface of the aluminum component to form an anodized aluminum oxide layer;

(b) depositing an aluminum layer on the anodized aluminum oxide layer by a chemical vapor deposition process comprising:

(i) placing the component in a process zone of a substrate processing chamber; and

(ii) providing an energized process gas comprising an aluminum-containing gas in the process zone to deposit an aluminum layer on the anodized aluminum oxide layer;

(c) heating the aluminum layer to re-flow the aluminum layer; and

(d) forming a second aluminum oxide layer from the aluminum layer.

2. (Original) A method according to claim 1 wherein the aluminum layer is at least partially consumed by the formation of the second aluminum oxide layer.

3. (Original) A method according to claim 2 wherein the aluminum layer is substantially completely consumed by the formation of the second aluminum oxide layer.

4. (Original) A method according to claim 1 comprising cleaning the surface of the aluminum component prior to (a).

PAGE 4/14 * RCVD AT 7/5/2006 11:59:56 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/12 * DNIS:2738300 * CSID:4155388380 * DURATION (mm-ss):03-08

5. (Original) A method according to claim 4 wherein cleaning the surface of the aluminum component comprises dipping the surface of the aluminum component into a cleaning solution.

6. (Original) A method according to claim 5 wherein the cleaning solution comprises an organic solvent, an alkaline solution, an acidic solution, water, de-ionized water, or mixtures thereof.

7. (Original) A method according to claim 5 wherein the surface of the aluminum component is dipped into a plurality of different cleaning solutions.

8. (Original) A method according to claim 4 comprising grit blasting the surface of the aluminum component prior to cleaning the surface of the aluminum component.

9. (Original) A method according to claim 1 wherein (d) comprises exposing the aluminum layer to an oxygen-containing gas.

10. (Original) A method according to claim 9 wherein the oxygen-containing gas is energized.

11. (Cancelled).

12. (Previously presented) A method according to claim 1 wherein (b) (ii) comprises energizing the process gas with RF energy.

PAGE 5/14 * RCVD AT 7/5/2006 11:59:56 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/12 * DNIS:2738300 * CSID:4155388380 * DURATION (mm-ss):03-08

13. (Previously presented) A method according to claim 1 wherein the aluminum-containing gas comprises dimethylaluminum hydride, dimethyl ethyl amine alane, argon, or mixtures thereof.

14. (Original) A method according to claim 1 wherein (a) comprises:

(i) dipping the surface of the aluminum component in an acidic solution; and

(ii) applying a positive voltage to the aluminum component.

15. (Original) A method according to claim 14 wherein the acidic solution comprises sulfuric acid, chromic acid, oxalic acid, phosphoric acid, water or mixtures thereof.

16. (Previously presented) A method of coating an anodized surface of an aluminum component, the method comprising:

(a) depositing an aluminum layer on the anodized surface of the aluminum component by a chemical vapor deposition process comprising:

(i) placing the component in a process zone of a substrate processing chamber; and

(ii) providing an energized process gas comprising an aluminum-containing gas in the process zone to deposit an aluminum layer on the anodized aluminum oxide layer;

(b) heating the aluminum layer to re-flow the aluminum layer; and

(c) forming an aluminum oxide layer from the aluminum layer.

17. (Original) A method according to claim 16 wherein the aluminum layer is at least partially consumed by the formation of the aluminum oxide layer.

PAGE 6/14 * RCVD AT 7/5/2006 11:59:56 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/12 * DNIS:2738300 * CSID:4155388380 * DURATION (mm-ss):03-08

18. (Original) A method according to claim 16 wherein (c) comprises exposing the aluminum layer to an oxygen-containing gas.

19. (Original) A method according to claim 16 wherein (a) comprises:

(i) placing the anodized surface of the aluminum component in a process zone; and

(ii) introducing a process gas comprising an aluminum-containing gas to the process zone.

20. (Original) A method according to claim 19 wherein the aluminum-containing gas comprises dimethylaluminum hydride, dimethyl ethyl amine alane, argon, or mixtures thereof.

21. (Previously presented) A method of fabricating an aluminum component, the method comprising:

(a) forming the aluminum component having a surface;

(b) anodizing the cleaned surface of the aluminum component to form an anodized aluminum oxide layer;

(c) depositing an aluminum layer on the anodized aluminum oxide layer by a chemical vapor deposition process comprising:

(i) placing the component in a process zone of a substrate processing chamber; and

(ii) providing an energized process gas comprising an aluminum-containing gas in the process zone to deposit an aluminum layer on the anodized aluminum oxide layer;

(d) heating the aluminum layer to re-flow the aluminum layer; and

(e) forming a second aluminum oxide layer from the aluminum layer.

PAGE 7/14 * RCVD AT 7/5/2006 11:59:56 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/12 * DNIS:2738300 * CSID:4155388380 * DURATION (mm-ss):03-08

22. (Original) A method according to claim 21 wherein the aluminum layer is at least partially consumed by the formation of the second aluminum oxide layer.

23. (Original) A method according to claim 21 comprising cleaning the surface of the aluminum component after forming the aluminum component and prior to anodizing the surface of the aluminum component.

24. (Original) A method according to claim 23 wherein cleaning the surface of the aluminum component comprises dipping the surface of the aluminum component into a cleaning solution comprising an organic solvent, an alkaline solution, an acidic solution, water, de-ionized water, or mixtures thereof.

25. (Original) A method according to claim 21 wherein (e) comprises exposing the aluminum layer to an oxygen-containing gas.

26. (Original) A method according to claim 21 wherein (c) comprises:

(i) placing a surface of the anodized aluminum oxide layer in a process zone; and

(ii) introducing a process gas comprising an aluminum-containing gas to the process zone.

27. (Original) A method according to claim 25 wherein the aluminum-containing gas comprises dimethylaluminum hydride, dimethyl ethyl amine alane, argon, or mixtures thereof.

28. (Original) A method according to claim 21 wherein (b) comprises:

(i) dipping the surface of the aluminum component in an acidic solution; and

(ii) applying a positive voltage to the aluminum component.

PAGE 8/14 * RCVD AT 7/5/2006 11:59:56 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/12 * DNIS:2738300 * CSID:4155388380 * DURATION (mm-ss):03-08

29. (Original) A method according to claim 28 wherein the acidic solution comprises sulfuric acid, chromic acid, oxalic acid, phosphoric acid, water or mixtures thereof.

30. (Currently amended) A coated aluminum component for a substrate processing chamber, the coated aluminum component comprising:

(a) an aluminum component having a surface;

(b) an anodized aluminum oxide layer formed on the surface of the aluminum component, the anodized aluminum oxide layer having a surface comprising penetrating surface features comprising imperfections, cracks, fissures and pores; and

(c) an oxidized CVD aluminum oxide layer on the anodized aluminum oxide layer, the oxidized CVD aluminum oxide layer having a thickness that is sufficiently large to substantially completely fill ~~filling~~ the penetrating surface features of the anodized aluminum oxide layer, the ratio of the thickness of the anodized aluminum oxide layer to the thickness of the oxidized CVD aluminum oxide layer being from about 5:1 to about 9:1.

31. (Canceled).

32. (Canceled).

33. (Previously presented) A coated aluminum component according to claim 30 wherein the anodized aluminum oxide layer has a thickness of from about 5 µm to about 100 µm.

34. (Previously presented) A coated aluminum component according to claim 30 wherein the oxidized aluminum oxide layer has a thickness of from about 0.5 µm to about 20 µm.

PAGE 9/14 * RCVD AT 7/5/2006 11:59:56 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/12 * DNIS:2738300 * CSID:4155388380 * DURATION (mm-ss):03-08

35. (Previously presented) A coated aluminum component according to claim 30 comprising aluminum between at least a portion of the anodized and oxidized aluminum oxide layers.

36. (Original) A coated aluminum component according to claim 30 wherein the aluminum component comprises an aluminum alloy material having a magnesium concentration ranging from about 3.5% to about 4.0% by weight, a silicon concentration ranging from 0% to about 0.03% by weight, an iron concentration ranging from 0% to about 0.03% by weight, a copper concentration ranging from about 0.02% to about 0.07% by weight, a manganese concentration ranging from about 0.005% to about 0.015% by weight, a zinc concentration ranging from about 0.08% to about 0.16% by weight, a chromium concentration ranging from about 0.02% to about 0.07% by weight, and a titanium concentration ranging from 0% to about 0.01% by weight.

37. (Original) A coated aluminum component according to claim 36 wherein other impurities each do not exceed about 0.03% by weight, and total other impurities do not exceed about 0.1% by weight.

38. (Original) A coated aluminum component according to claim 36 wherein the aluminum alloy material comprises impurity particles, at least 95% of the impurity particles having a size of less than 5 μm, no more than 5 % of the impurity particles having a size in the range of from 5 μm to 20 μm, no more than 0.1% of the particles having a size larger than 20 μm, and no impurity particles having a size larger than 40 μm.

39. (Original) A coated aluminum component according to claim 30 wherein the aluminum component comprises 6061 or a 5000 series (5xxx) aluminum alloy material.

40. (New) A method according to claim 1 comprising energizing the process gas using microwave energy.

PAGE 10/14 * RCVD AT 7/5/2006 11:59:56 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/12 * DNIS:2738300 * CSID:4155388380 * DURATION (mm-ss):03-08